

CONTINUOUS NEAT POLYMERIZATION AND AMBIENT GRINDING METHODS OF POLYOLEFIN DRAG REDUCING AGENTS

Abstract of the Disclosure

5 A process for continuously producing a polymer drag reducing agent (DRA)
is described. The process concerns mixing a monomer and a catalyst in at least
one continuously stirred tank reactor (CSTR) to form a mixture. The mixture is con-
tinuously injected into a volume continuously formed by a thermoplastic material,
such as polyethylene. The thermoplastic material is periodically sealed off to form a
10 temporary container or bag. The monomer is permitted to polymerize in the tempo-
rary container to form polymer. In one non-limiting embodiment, the polymerization
in the bag takes place within an inert, circulating fluid that accelerates heat transfer.
The polymer and the temporary container are then ground together, preferably at
non-cryogenic temperatures, to produce a particulate polymer drag reducing agent.
15 In one preferred, non-limiting embodiment, the grinding or pulverizing occurs in the
presence of at least one solid organic grinding aid. Finally, the particulate polymer
drag reducing agent may be combined with a dispersing fluid.